

CLAIMS

What is claimed is:

1 1. A method for a network device to negotiate a common mode of
2 communication between two nodes, comprising:
3 a) establishing a first communication path between the network device and a first node;
4 b) establishing a second communication path between the network device and a second
5 node;
6 c) establishing a third communication path through the network device, the third
7 communication path coupling the first and second communication paths to provide a
8 common mode of operation between the first node and the second node.

1 2. The method of claim 1, wherein the network device is a probe and establishing
2 the third communication path through the network device establishes a point to point link
3 between the first and the second nodes. .

1 3. The method of claim 1, wherein establishing the first communication path
2 between the network device and the first node comprises negotiating a mode of operation
3 with the first node.

1 4. The method of claim 3, wherein negotiating a mode of operation with the first
2 node comprises negotiating a speed of a transmission of data over the first
3 communication path between the network device and the first node.

1 5. The method of claim 3, wherein negotiating a mode of operation with the first
2 node comprises negotiating one of half duplex and full duplex communication over the
3 first communication path between the network device and the first node.

1 6. The method of claim 3 wherein establishing a second communication path
2 between the network device and the second node comprises negotiating a mode of
3 operation with the second node.

1 7. The method of claim 6, wherein establishing a third communication path
2 through the network device, the third communication path coupling the first and second
3 communication paths to provide a common mode of operation between the first node and
4 the second node, comprises:
5 comparing the mode of operation with the first node and the mode of operation with the
6 second node;
7 selecting one of multiple communication paths through the network device as the third
8 communication path that provides a common mode of operation between the first node
9 and the second node.

1 8. The method of claim 7, wherein the common mode of operation between the
2 first node and the second node is the best mode of operation available between the first
3 node and the second node.

1 9. A network device that negotiates a common mode of communication between
2 two nodes, comprising:
3 means for establishing a first communication path between the network device and a first
4 node;
5 means for establishing a second communication path between the network device and a
6 second node;
7 means for establishing a third communication path through the network device, the third
8 communication path coupling the first and second communication paths to provide a
9 common mode of operation between the first node and the second node.

1 10. A network device inserted between point-to-point network connected
2 nodes to support an operational mode of communication in common between the nodes,
3 comprising:
4 means for enabling a first transmit data path connection between a first port of the
5 network device and the first node;
6 means for enabling a second transmit data path connection between a second port
7 of the network device and the second node;
8 means for enabling a first receive data path connection between a third port of the
9 network device and the first node;
10 means for enabling a second receive data path connection between a fourth port of
11 the network device and the second node;
12 means for enabling a connection between a first repeater and the first and fourth
13 ports, and a connection between a second repeater and the second and
14 third ports to support full-duplex communication between the first and
15 second nodes.

1 11. An article of manufacture comprising a machine readable medium having a
2 plurality of machine readable instructions stored thereon, wherein the instructions, when
3 executed by a processor, cause the processor to:
4 a) establish a first communication path between the network device and a first node;
5 b) establish a second communication path between the network device and a second
6 node;
7 c) establish a third communication path through the network device, the third
8 communication path coupling the first and second communication paths to provide a
9 common mode of operation between the first node and the second node.

1 12. The article of manufacture of claim 11, wherein the network device is a probe
2 and wherein the instructions that cause a processor when executed to establish the third
3 communication path through the network device causes the processor when executed to
4 establish a point to point link between the first and the second nodes.

1 13. The article or manufacture of claim 11, wherein the instructions that cause a
2 processor when executed to establish the first communication path between the network
3 device and the first node cause the processor when executed to negotiate a mode of
4 operation with the first node.

1 14. The article of manufacture of claim 13, wherein the instructions that cause a
2 processor when executed to negotiate a mode of operation with the first node cause the
3 processor when executed to negotiate a speed of a transmission of data over the first
4 communication path between the network device and the first node.

1 15. The article of manufacture of claim 13, wherein the instructions that cause the
2 processor when executed to negotiate a mode of operation with the first node cause the
3 processor when executed to negotiate one of half duplex and full duplex communication
4 over the first communication path between the network device and the first node.

1 16. The article of manufacture of claim 13 wherein the instructions that cause a
2 processor when executed to establish a second communication path between the network
3 device and the second node cause the processor when executed to negotiate a mode of
4 operation with the second node.

1 17. The article of manufacture of claim 16, wherein the instructions that cause a
2 processor when executed to establish a third communication path through the network

3 device, the third communication path coupling the first and second communication paths
4 to provide a common mode of operation between the first node and the second node,
5 cause the processor when executed to:
6 compare the mode of operation with the first node and the mode of operation with the
7 second node;
8 select one of multiple communication paths through the network device as the third
9 communication path that provides a common mode of operation between the first node
10 and the second node.

1 18. The article of manufacture of claim 17, wherein the common mode of
2 operation between the first node and the second node is the best mode of operation
3 available between the first node and the second node.